

1958

## 42nd Annual Meeting, 1958. Program

Academy Editors

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## ARKANSAS ACADEMY OF SCIENCE

Mr. Lyndal York reported the desire of the Collegiate Section to become a separate Academy of Science. He reported 45 members for the current year. The Collegiate Academy was authorized by the membership, with sponsorship of the Senior Academy.

Mr. Bogan proposed that the Academy authorize \$100 for the National Science Fair fund, if such funds are needed for the current year. This action was taken.

The Committee concerned with the Academy position with respect to agriculture and home economics teachers of science reported a statement in which it was urged that such teachers should receive additional training in science. Summer Science Institute training was recommended. The report was adopted.

Dr. D. M. Moore called attention of the members to the meeting held 25 years previously in Little Rock. This was the first meeting of the reorganized Academy of Science.

Dr. Mundie officially installed Dr. C. E. Hoffman as the new president of the Academy. Dr. Hoffman expressed his desire for an active and profitable Academy year, and adjourned the meeting.

Respectfully submitted,

Lowell F. Bailey, Secretary  
Arkansas Academy of Science

### PROGRAM

#### Friday, April 25

- 9:00 a.m. Registration.
- 11:00 a.m. Business Meeting.
- 12:30 p.m. Luncheon, Coral Room, Medical Center.
- 1:15 p.m. General Meeting. Welcome to Medical Center, Dr. Paul L. Day, Professor of Biochemistry. Speaker, Dr. Carey Stabler, President, Little Rock University.
- 1:50 p.m. General Lecture, Dr. James H. Stevenson, Head, Science Division, Little Rock University, "Fisheries Management of Lake Hamilton."
- 2:15 p.m. Sectional Meetings.

## ARKANSAS ACADEMY OF SCIENCE

- 6:00 p.m. Banquet, Central High School Cafeteria.  
Speaker, Dr. Paul Sharrah, Professor  
of Physics, University of Arkansas,  
"Satellites and Space Travel."  
7:30 p.m. State Science Fair Exhibit, Central  
High School Field House.

### Saturday, April 26

- 9:00 a.m. Film, "Our Friend the Atom," a Walt  
Disney Production.  
10:00 a.m. General Meeting, jointly with Junior  
Academy.  
10:45 a.m. Business Meeting. Announcement of next  
year's meeting place. Adjournment  
by new president.  
12:00 noon Awards Luncheon, Central High School  
Cafeteria.

## SECTIONAL PROGRAM

### Biology and Agriculture

Chairman: Jack Wood Sears  
Harding College

- Occurrence of Tree Species as Related to Underly-  
ing Rocks in the Arbuckle Mountains, Oklahoma.  
Edward E. Dale, Jr., University of Arkansas.  
A Report on a Cytological Study of *Chlamydomonas*.  
Neal Buffaloe, Arkansas State Teachers College.  
New Records for the Arkansas Flora. Dwight M.  
Moore, Arkansas Agriculture and Mechanical Col-  
lege.  
Comparison of Growth Rates of Game Fish in Lake  
Catherine, Lake Hamilton and Lake Ouachita, Ar-  
kansas. Andrew H. Hulsey, Arkansas Game and Fish  
Commission, and James Stevenson, Little Rock  
University.  
The Influence of Organic Matter and Certain Anions  
on the Phosphorus Content of Oats. D. J. Albrit-  
ton, Arkansas Agricultural, Mechanical and Nor-  
mal College.  
Spawning the Rainbow Trout. Film by Jack Atkins,  
University of Arkansas.

## ARKANSAS ACADEMY OF SCIENCE

### Chemistry

Chairman: E. S. Amis  
University of Arkansas

- Some Fundamental Reactions of Alkaloid Biogenesis. A. Smith, University of Arkansas.
- A Study of the Decarbonylation of Ethyl Hydrogen Phenylmalonate in Aqueous Alcohol. Charles T. Adams and Arthur Fry, University of Arkansas.
- Ionic Size. Kurt Stern, University of Arkansas.
- A Study of a Zirconium Alloy. William K. Noyce, University of Arkansas.
- The Stereochemistry of Copper (II). Robert Kruh, University of Arkansas.
- The Kinetics of the Exchange of Oxygen Between Permanganate Ion and Water. H. O. McDonald, University of Arkansas.
- The Isotope Effect in the Adsorption of Nitrogen. Marijon McClellan, University of Arkansas.
- An Electron Exchange Study in Mixed Solvents. D. M. Mathews, E. S. Amis, J. D. Hefley, and J. O. Ware, University of Arkansas.
- Speeding the Training of Chemists; Twenty-Four Years Experience with Twenty-Two Hundred Students. Otto Smith, Southern State College.
- Utilization of Aminoethanol by the Chick on Glycine Deficient Diet. John H. Wikman, Robert L. Wixom, George E. Pipkin, and Paul L. Day, University of Arkansas Medical School.
- Fungistatic Studies, William K. Easley and M. Fred Meyer, East Tennessee State College.

### Collegiate

Chairman: Lyndal York  
Harding College

- Carotene, the Pigment, and Its Vitamin A Derivative. Lillian Blackmon, Ouachita Baptist College.
- Determination of Particle Weights of Virus Mutants by Diffusion-Rate Studies. Gary Ackers, Harding College.
- A Report on Spectrochemical Analysis. Franklin N. Horton, Ouachita Baptist College.
- Prelude to Conflict: The Election of 1856. Mary Ann Faris, College of the Ozarks.

## ARKANSAS ACADEMY OF SCIENCE

- Psychopharmacology. Aubrey M. Worrell, Jr., Ouachita Baptist College.  
The Interrelation of Genes, Enzymes and Viruses. Lyndal York, Harding College.  
Derivation and Application of Beer's Law. Harris Lloyd, Ouachita Baptist College.  
Determination of the Color Reduction Properties of Hydroxylamine in Polybutadiene Latex. Lyndal York, Harding College.

### Geology

Chairman: James H. Quinn  
University of Arkansas

- Regional Metamorphism of Basic Rocks in Northwestern Maine. Robert J. Willard, University of Arkansas.  
Geology of a Portion of Prairie Township, Washington County, Arkansas. Kern C. Jackson and Ross Henry Pohlo, University of Arkansas.  
Loess Deposits of Northern Arkansas. Harry L. Brown, Jr., University of Arkansas.  
Multi-Channel Discharge of Rio Caroni, Venezuela, H. F. Garner, University of Arkansas.  
Millerite-Violarite Relationships at the Eastern Metals Mine, Montmagny County, P.Q. D.W.T. Pollock, University of Arkansas.  
Geology of the Southwestern Portion of Washington County, Arkansas. Ruey A. Ault, Charles E. Hollyfield, and James R. Ratliff, University of Arkansas.  
Surfaces of Planation in the Paleozoic Areas of Arkansas. Harry Emerson Thomas, University of Arkansas.

### History and Political Science

Chairman: Keith K. Petersen  
University of Arkansas

- Benjamin Franklin: From British Reformer to American Revolutionary, 1706-1790. Thomas Blossom, Southern State College.  
The Social Ideas of Thomas Jefferson. Charles G. Hamilton, College of the Ozarks.

## ARKANSAS ACADEMY OF SCIENCE

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- William G. D. Worthington: Special Agent for the United States Government in South America, 1817-1819. John Pine, University of Arkansas.
- The Leadership Principle of the National Socialist State. Murray Abend, Southern State College.
- The Agendas of the United National General Assembly: A Content Analysis. Keith S. Petersen, University of Arkansas.

### Mathematics

Chairman: Lee Lorch  
Philander Smith College

- The Discriminant Function, Its Associated Procedures and Applications. G. D. Kyle, Arkansas A. M. and N. College.
- On Numerical Methods of Solving Linear Equations, Collin Hightower, University of Arkansas.
- The Undergraduate Honors Program at the University of Arkansas. John Keesee, University of Arkansas.
- A Student Looks at a Visiting Lecturer. Robert Robinson, Philander Smith College.

### Physics

Chairman: L. B. Ham  
University of Arkansas

- History and Purpose of the IGY. P. C. Sharrah, University of Arkansas.
- Correlation of Auroral Displays and Terrestrial Magnetic Disturbances. C. Y. Fan, University of Arkansas.
- Cosmic Ray Neutron Burst on February 26, 1958. E. H. Cathey, University of Arkansas.
- The Semi-Conducting Properties of Gray Tin as an Introduction to Solid-State Research in Physics. G. F. Powers, G. E. Louallen, and R. M. Rickett, Arkansas State Teachers College.
- Instrument for X-Ray Study of Liquids. J. I. Petz, University of Arkansas.
- Review of Recent Conferences on Laboratory Instructions. L. B. Ham, University of Arkansas.

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ARKANSAS ACADEMY OF SCIENCE

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Psychology and Sociology

Chairman: Robert C. Cannon  
V. A. Hospital, Little Rock

Panel Discussion: A Proposal for a Doctoral Program in Psychology at the University of Arkansas.  
Panel: John Anderson and Philip Trapp, University of Arkansas. Moderator: Hardy Wilcoxon, University of Arkansas.

Science Education

Chairman: Robert Siegfried  
University of Arkansas

The United States Position in World Science Education. Raymond R. Edwards, Graduate Institute of Technology, University of Arkansas.

Education Program of the Central Arkansas Section American Chemical Society. Robert L. Wixom, School of Medicine, University of Arkansas.

Education Committee Activities of the South Arkansas Section, American Chemical Society. R. M. Engelbrecht, Lion Oil Company.

Panel Discussion: Toward a Better Utilization of High School Science Courses in Beginning College Science Courses. Panel: John M. Smith, Horace Mann High School; B. C. Dodson, Crossett High School; Robert F. Kruh, University of Arkansas. Moderator: Robert Siegfried, University of Arkansas.

Geography

Chairman: O. O. Maxfield  
University of Arkansas

(Presented by Title Only)